



TAKING A STATEWIDE LONGITUDINAL DATA SYSTEM (SLDS) FROM FUNDAMENTALS TO ADVANCED CAPABILITIES

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25th Annual STATS-DC 2012 Data Conference

AGENDA

Agenda Item	Presenter
Introductions	Melissa, Brian, Ernie, Mike
Data and Reporting Fundamentals	Melissa
Introduction to Growth	Ernie
Advanced Analytics: SGP, WISEdash, and Guided Analysis	Melissa
Partnerships	Melissa, Brian, Ernie, Mike
Advanced Analytics: Value-Added and Edvantage	Brian, Ernie, Mike
Next Steps	Melissa
Wrap-Up and Q&A	



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DATA AND REPORTING FUNDAMENTALS

DATA SYSTEM BACKGROUND

PRE-GRANT

- Implementation of an individual student enrollment system data collection in 2004-05. Included third Friday enrollment, year end indicators, discipline, and IDEA child count.
- Creation of a Unique Student ID (WSN) for all WI public students through Wisconsin Student Locator System (WSLS)
- Student data available starting with the 2005-06 school year.



SLDS GRANTS

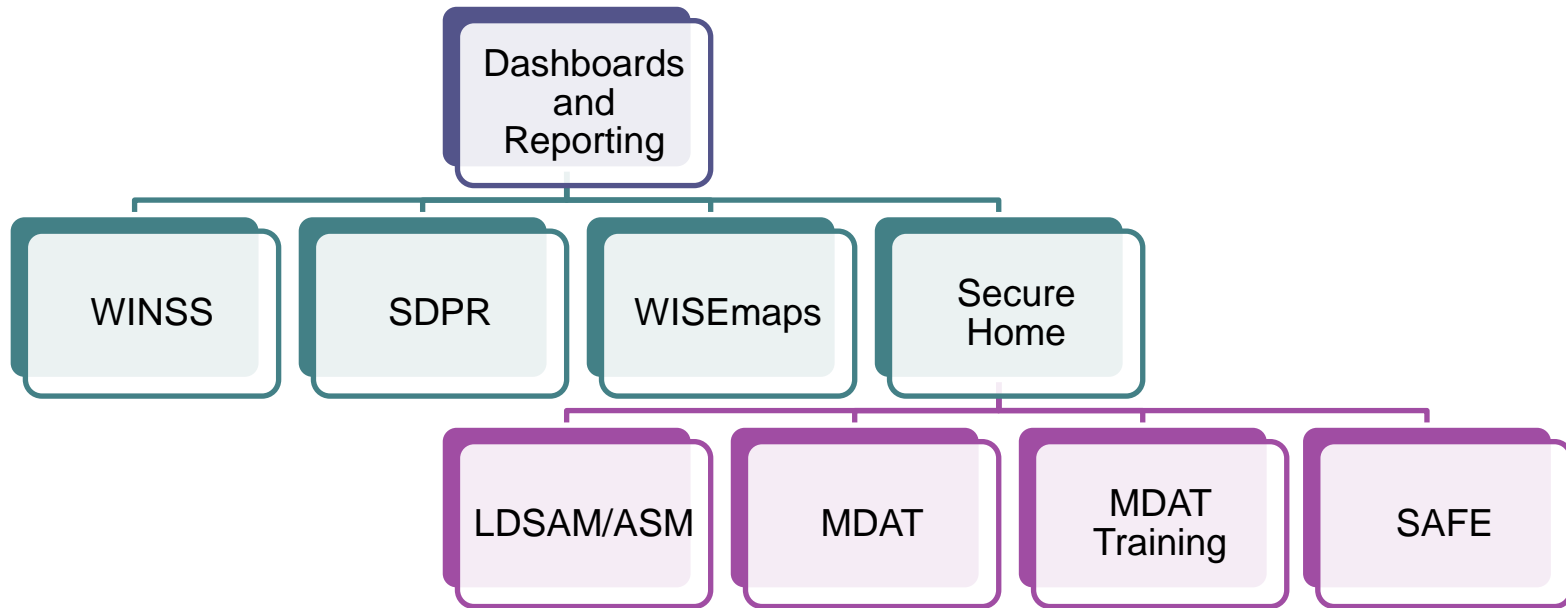
1ST GENERATION DATA PROJECTS

- LDS Data Warehouse or ODS
 - First student-centric data warehouse at DPI
 - Stored and linked student and school data from a variety of sources including collection systems, spreadsheets, and external files for reporting and analysis
 - ISES YE, ISES CD, ISES Discipline, WSAS, ACT, AP, SGP, ACCESS ELL, Graduation, School Data, WSLS, State Outcomes Data, P20 NSC Enrollment Data, Student Growth Percentile (SGP) Data, Graduation Cohort and Rate Data
- Coursework Completion System (CWCS)
 - Course data including a student-teacher-course link



SLDS GRANTS

1ST GENERATION DASHBOARD AND REPORTING PROJECTS



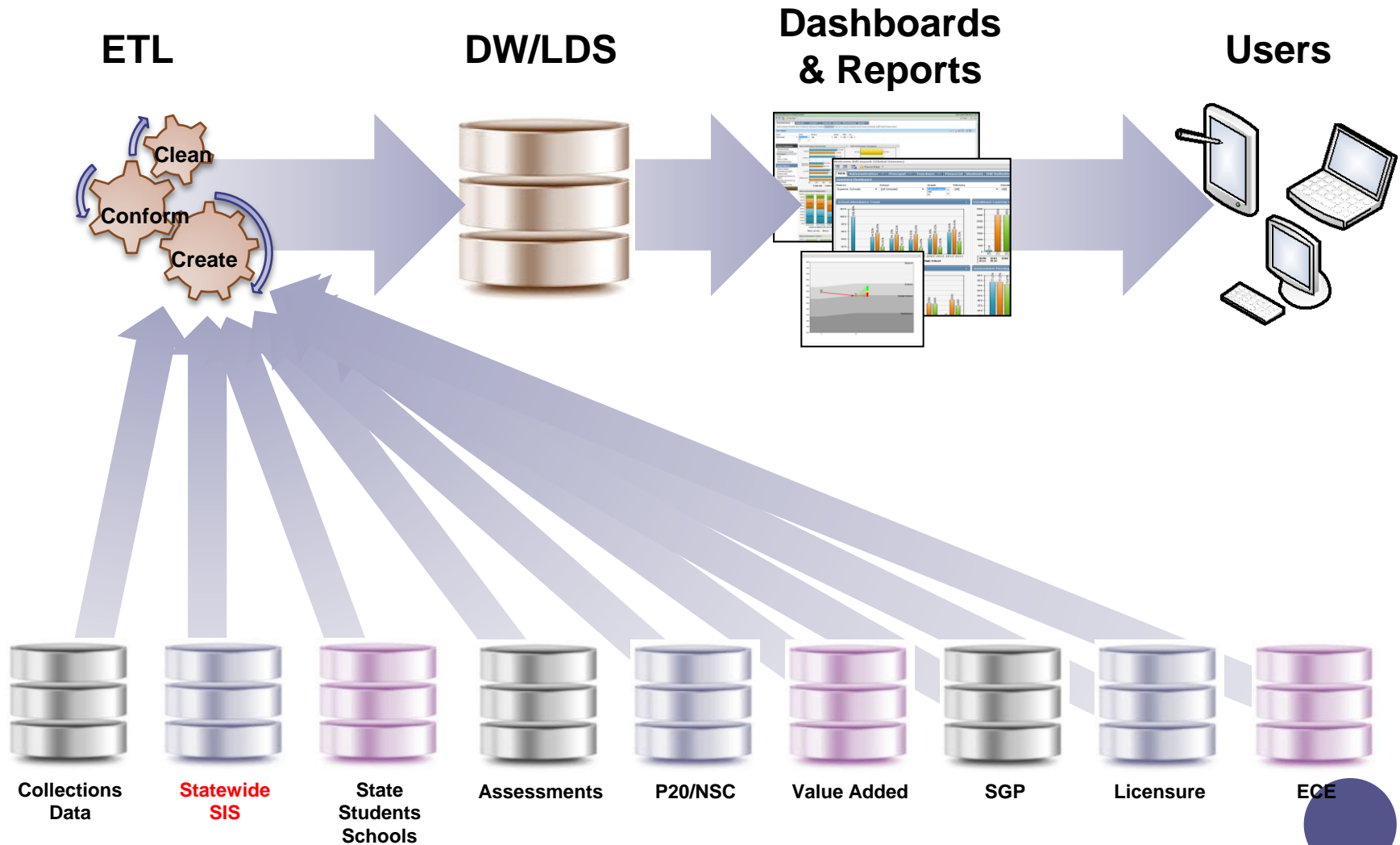
SLDS GRANTS

NEXT GENERATION DATA, DASHBOARDS, REPORTING

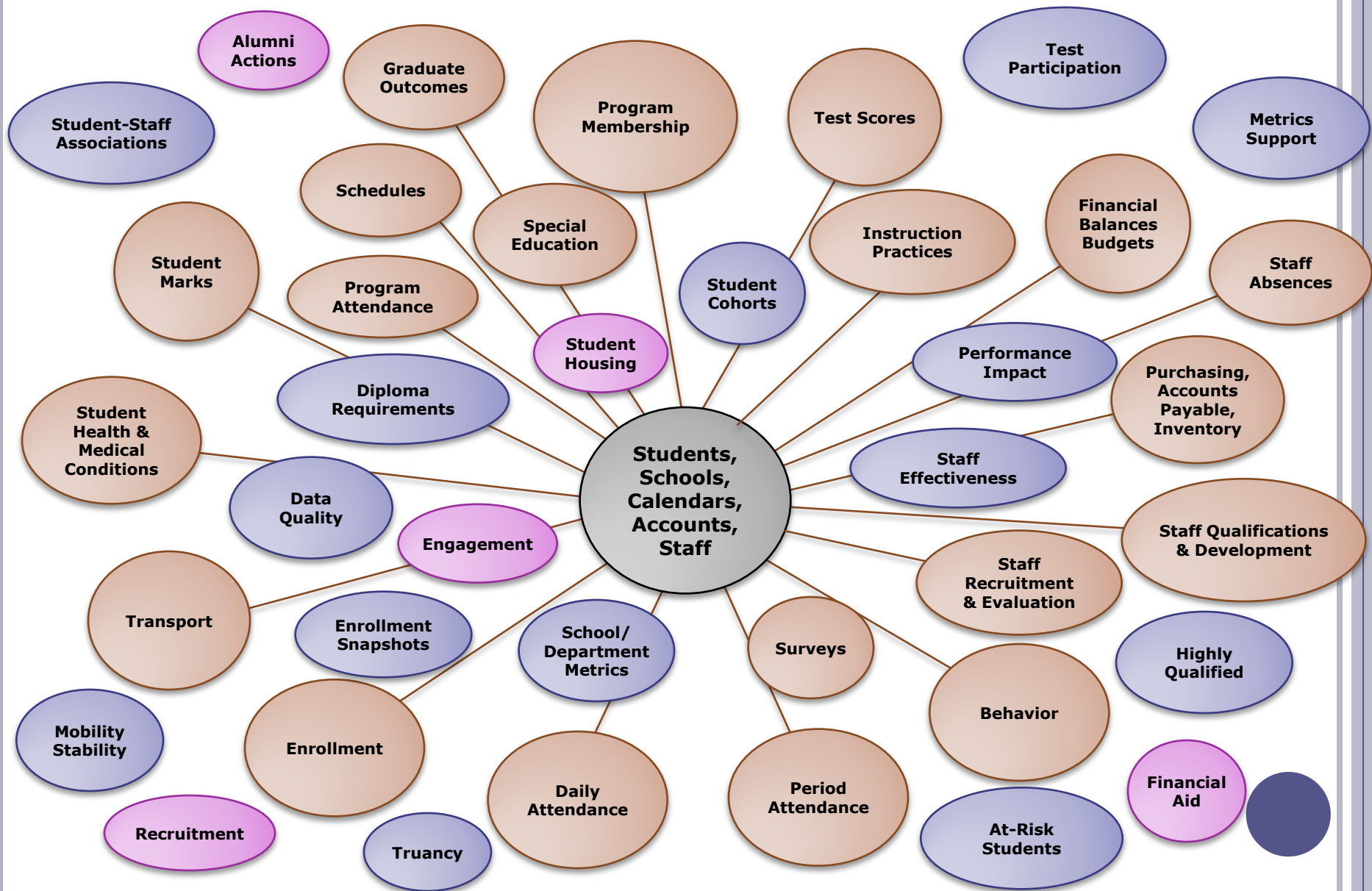
- DPI purchased a suite of data, dashboard and reporting tools
 - Data Model & Dashboard from VersiFit Technologies
 - Based in Appleton
 - Serves MMUSD, MPS, Chicago Public Schools, Oregon State, Hawaii, etc.
 - Focus on business intelligence solutions specific to education
 - Contract signed 02/16/11
 - ETL and Reporting tools from Microsoft
 - Reporting tool will also be utilized throughout the agency for operational reporting.
 - The LDS ODS is now currently being used as a data store as we transition to our new data warehouse system.
 - Wisconsin Information System for Education Dashboard solution or WISEdash, powered by Edvantage



WISEDASH ARCHITECTURE

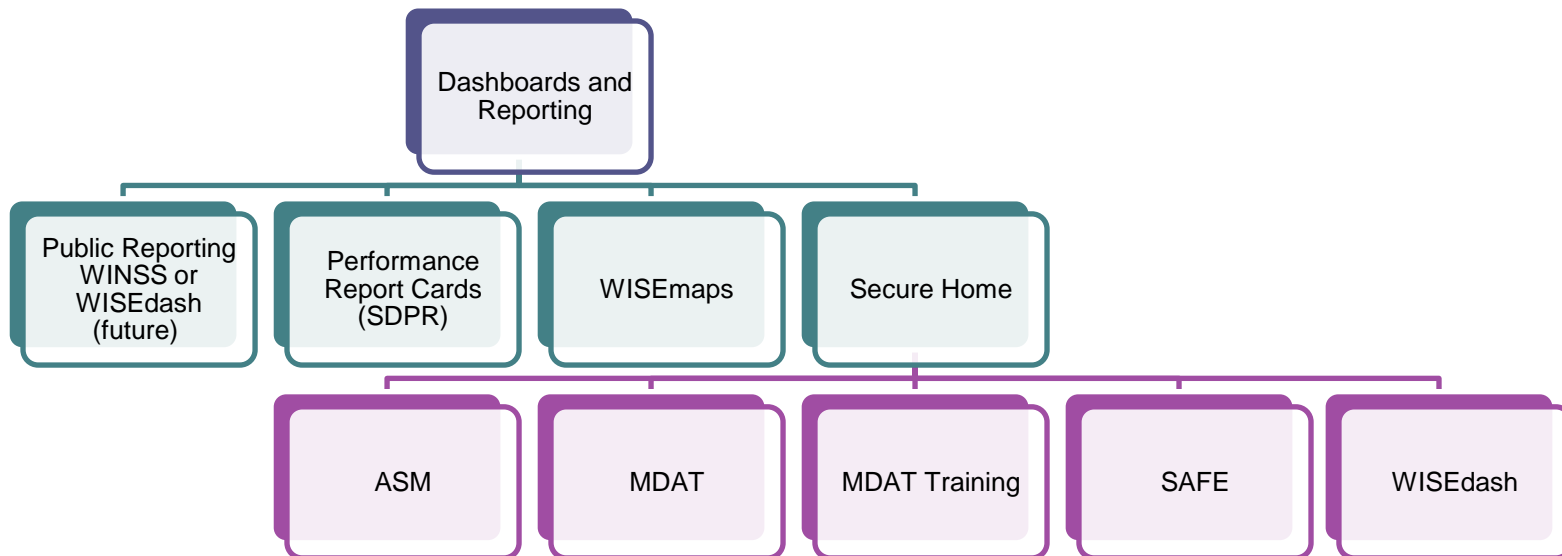


EDVANTAGE™ DOMAINS



SLDS GRANTS

DASHBOARDS AND REPORTING





INTRODUCTION TO GROWTH

ACHIEVEMENT, GROWTH AND VALUE-ADDED

- Achievement (NCLB)
 - a “point in time” measure of student proficiency
 - compares the measured proficiency rate with a predefined proficiency goal
- Gain (MDAT)
 - measures average gain in student scores from one year to the next
- Growth (SGPs)
 - measures average gain in student scores from one year to the next
 - accounts for the prior knowledge of students
- Value-Added (VARC)
 - measures contribution of teachers/schools/districts to gain in student scores
 - accounts for the prior knowledge of students
 - accounts for student demographic characteristics
 - accounts for test measurement error



ALL THESE MEASURES ARE BASED ON STUDENT TEST DATA, BUT ANALYZED DIFFERENT WAYS

	Attainment	Gain/Growth	Value-Added
Evaluate based on student testing performance	Yes	Yes	Yes
Evaluate schools for meeting the needs of all students	No	Yes	Yes
Hold schools accountable for what they can control	No	No	Yes

COMBINING MEASURERS: ACHIEVEMENT, GROWTH OR VALUE-ADDED

- For the most complete picture of student and school performance, it is best to look at Achievement in combination with Growth or Value-Added.
- This will tell you:
 - What students know at a point in time (**Achievement**)
 - How students at your school are growing (**Growth**) or how your school is affecting student academic growth (**Value-Added**)



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ADVANCED ANALYTICS: SGP, WISEDASH, AND GUIDED ANALYSIS

DEMONSTRATION

- Tutorial

- WISEdash
- SGP visualization
- Guided Analysis

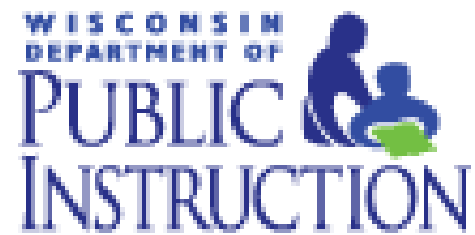
- Note: The tutorial shown in the presentation will soon be available here:

<http://dpi.wi.gov/lds/dashhome.html>.

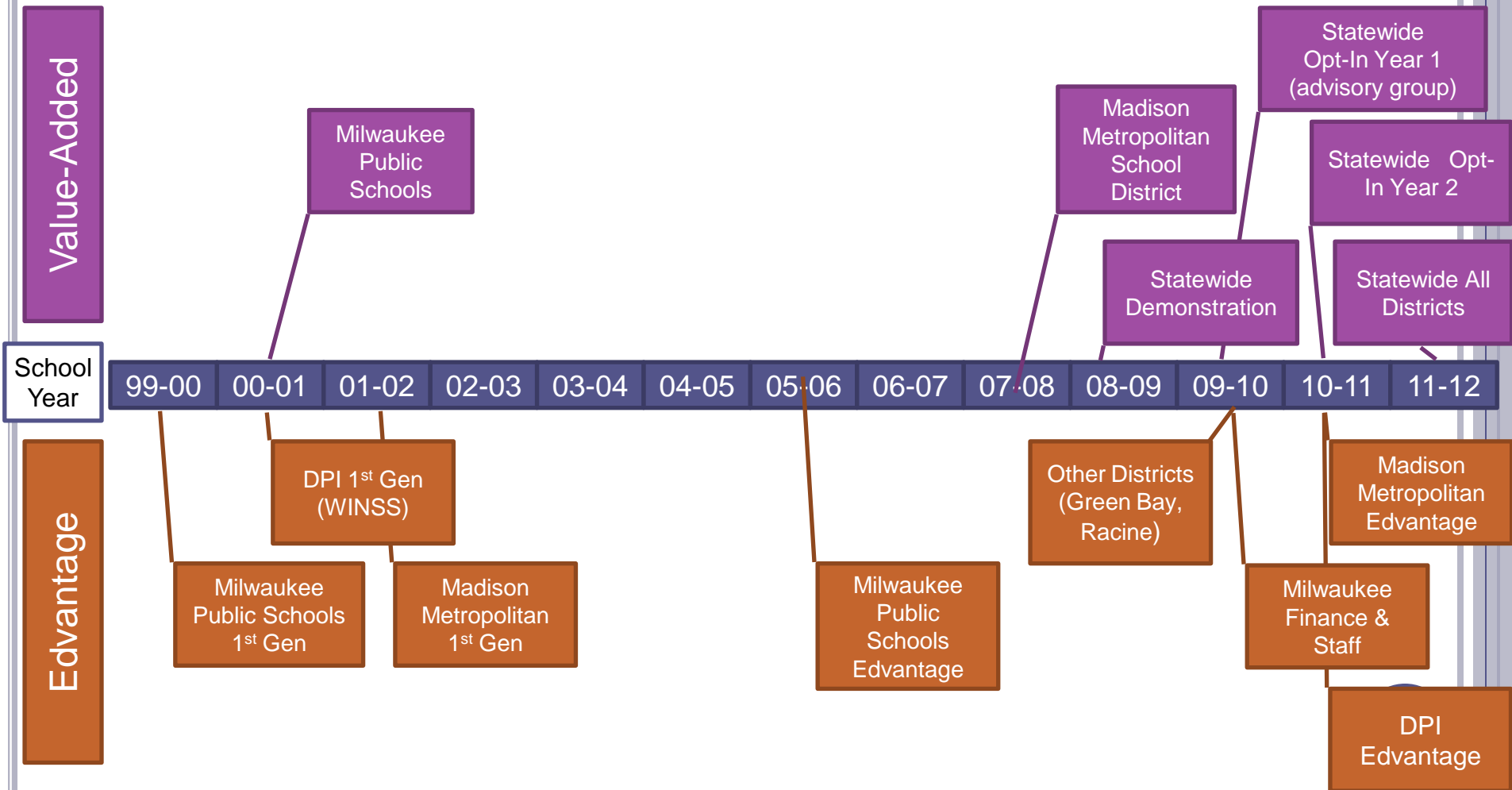




PARTNERSHIPS



EVOLUTION TIMELINE



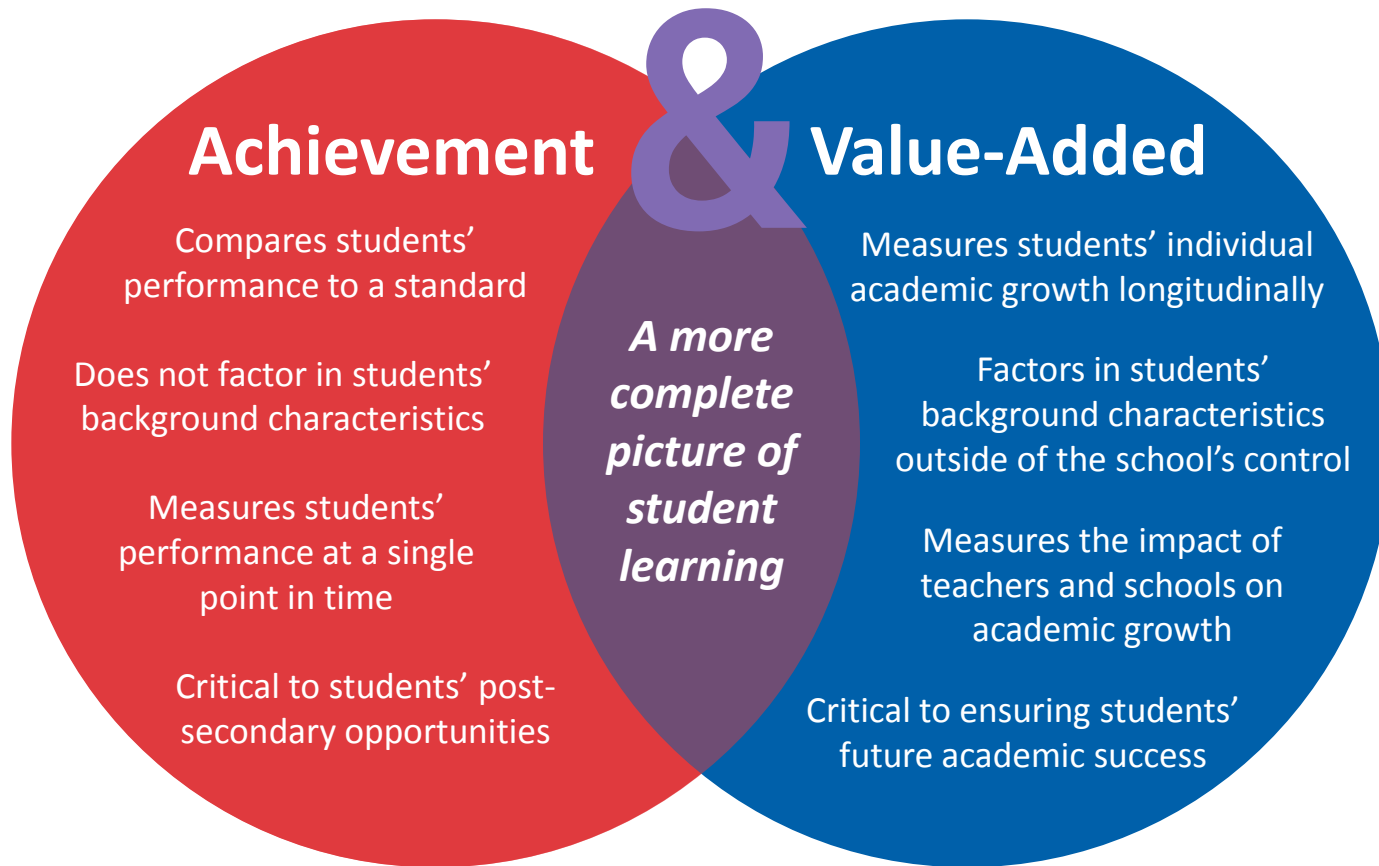
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ADVANCED ANALYTICS: VALUE- ADDED AND EDVANTAGE

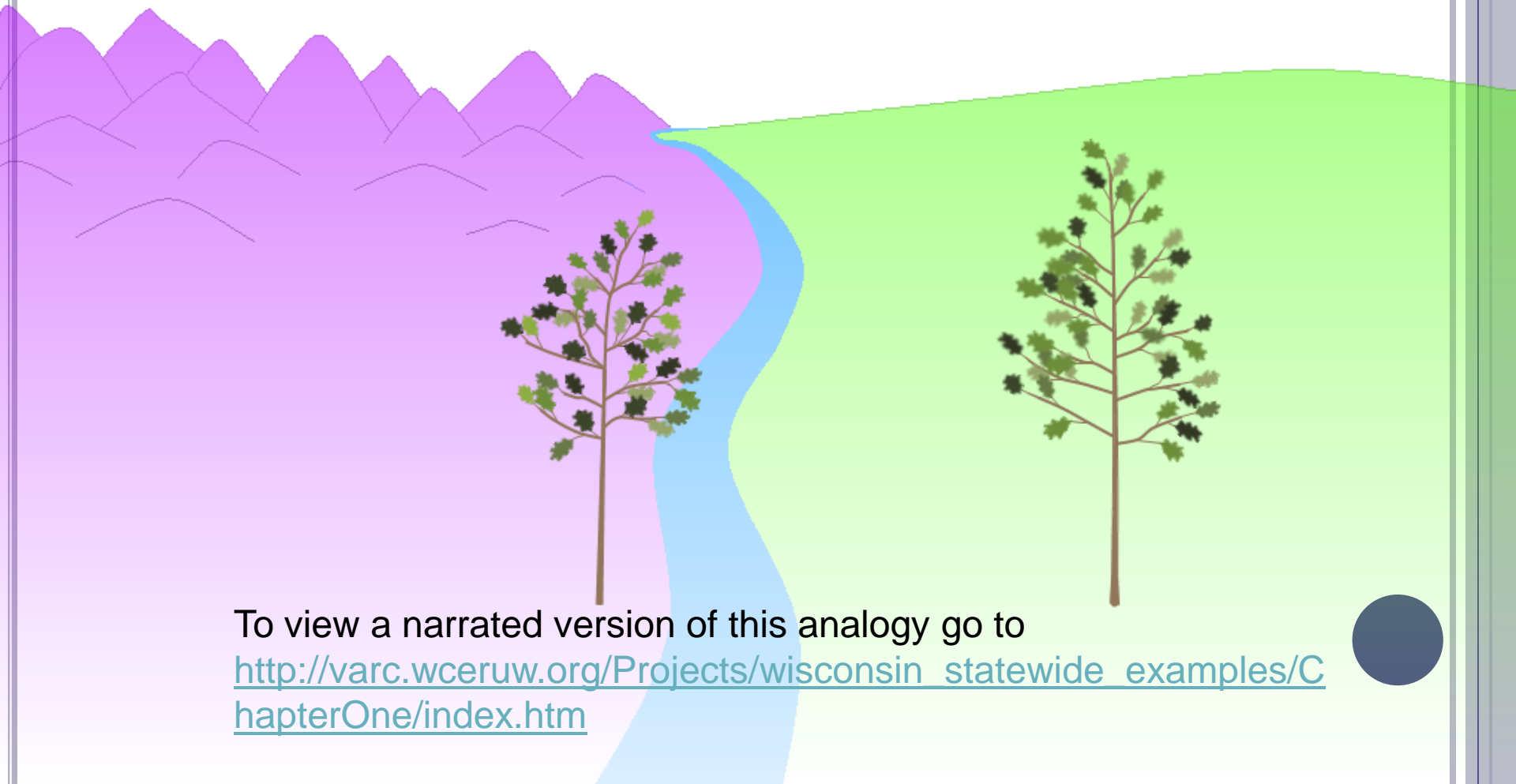
VALUE-ADDED PARTNER DISTRICTS



THE POWER OF TWO



THE OAK TREE ANALOGY



To view a narrated version of this analogy go to
http://varc.wceruw.org/Projects/wisconsin_statewide_examples/ChapterOne/index.htm

VALUE-ADDED COLOR CODING



These colors are meant to categorize results at a glance, but making responsible decisions based on Value-Added estimates may require more careful use of the data.

General guidelines:



Green and Blue results are areas of relative strength. Student growth is above average.

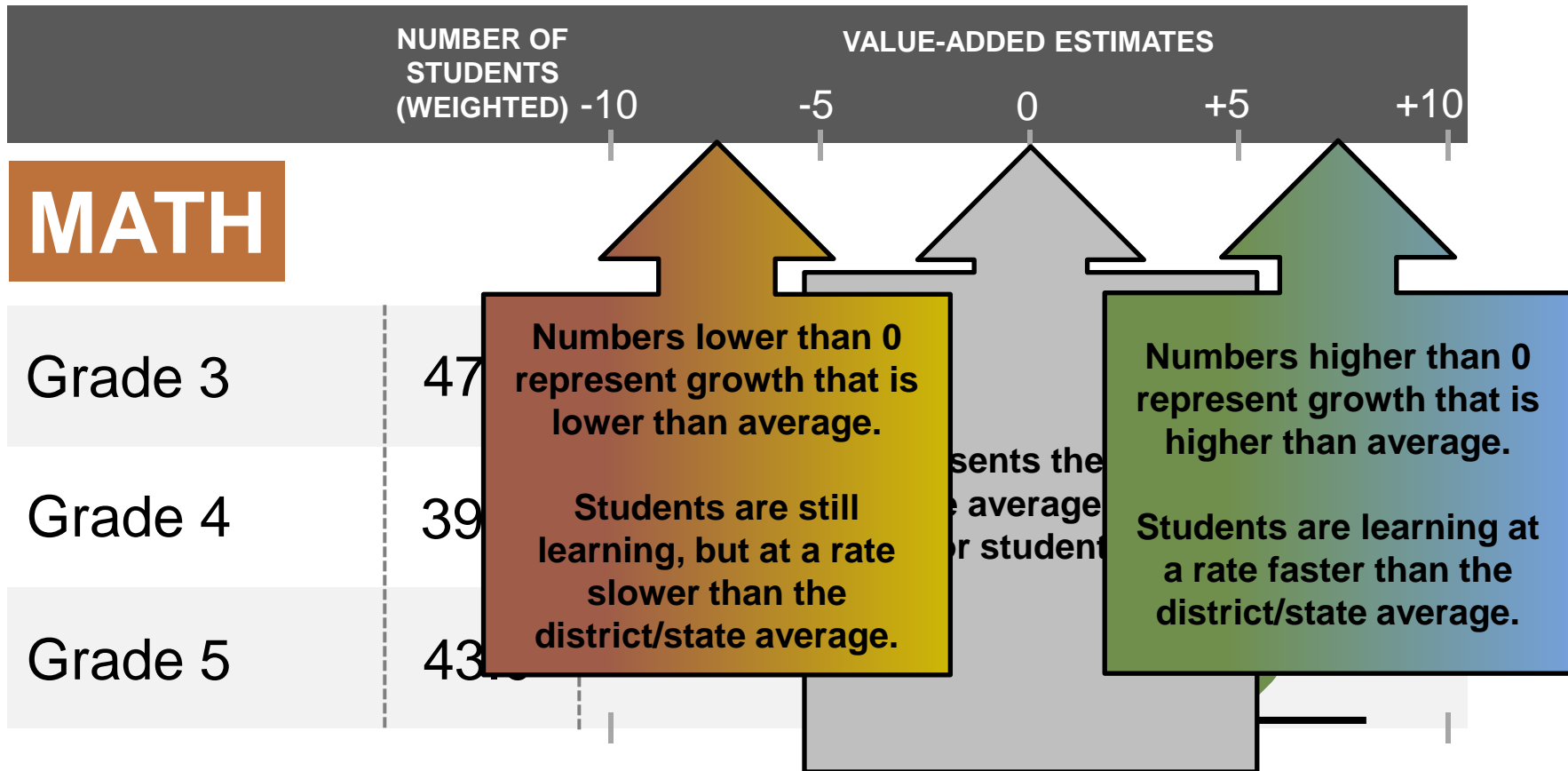


Gray results are on track. In these areas, there was not enough data available to differentiate this result from average.

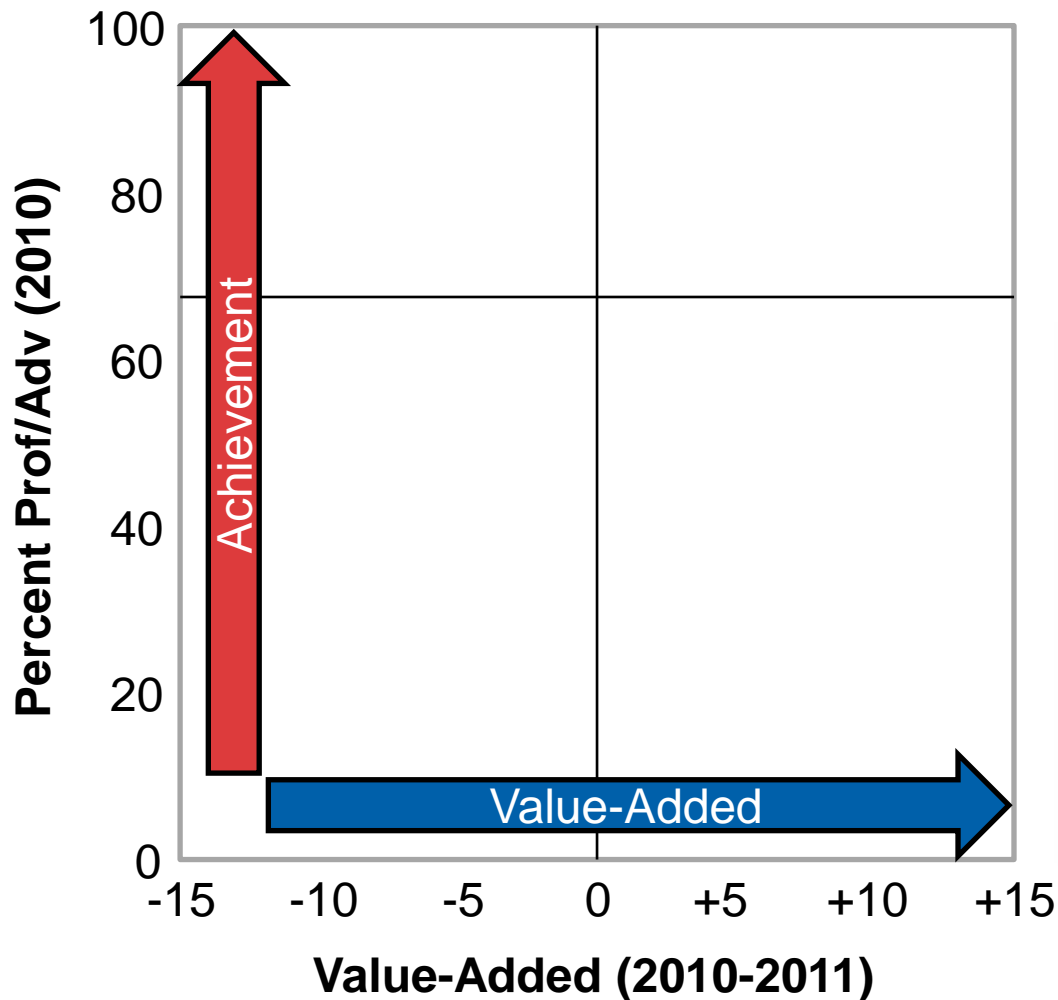


Yellow and Red results are areas of relative weakness. Student growth is below average.



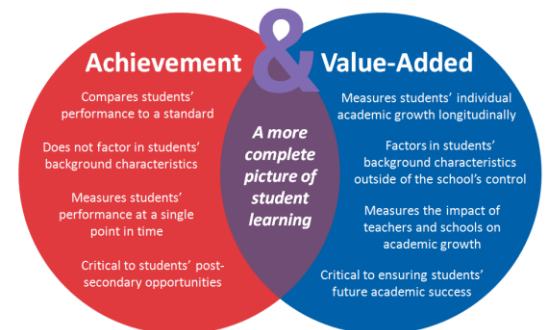


VALUE-ADDED SCATTER PLOTS

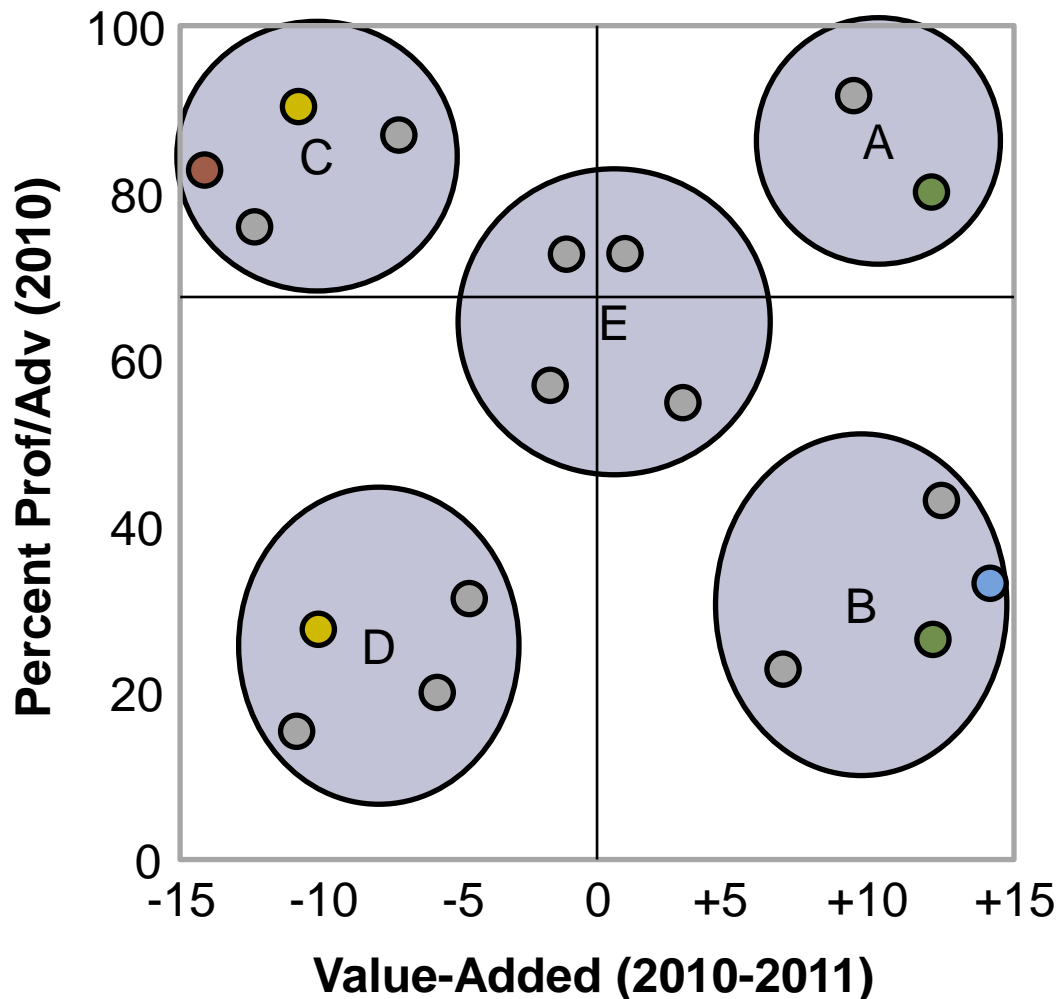


These scatter plots are a way to represent **Achievement** and **Value-Added** together

The Power of Two



VALUE-ADDED SCATTER PLOTS




A. Students know a lot and are growing faster than predicted

B. Students are behind, but are growing faster than predicted

C. Students know a lot, but are growing slower than predicted

D. Students are behind, and are growing slower than predicted

E. Students are about average in how much they know and how fast they are growing

 Schools in your district

VALUE ADDED DATA INTEGRATION

- Historically VA data was collected at individual districts and integrated into local DW's .
- Each deployment was unique.
- A common data model, data set, and data visualization that could be used for all districts and the state was developed.
- VARC produces VA data sets periodically through the year.
- A standard loader application was created to automatically integrate this into the DW



DEMONSTRATION

- Value-Added Dashboard
- <http://dashboard.demo.versifit.com/Dashboard/>

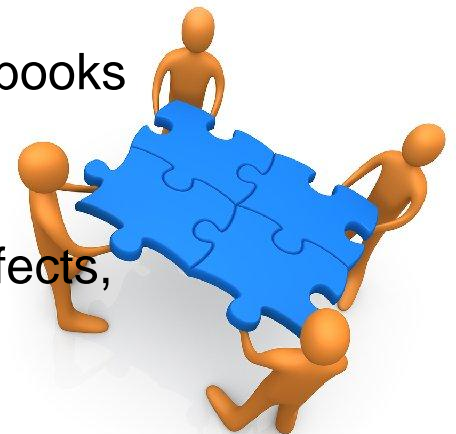




NEXT STEPS

NEXT STEPS

- Value-added implemented statewide through WISEdash by the end of 2012
- Integration of the following datasets into the Edvantage DW for analysis:
 - Statewide SIS starting 2013
 - Additional assessment data into the data warehouse including ACCESS for ELL, NWEA MAP, and the new SMARTER assessment
 - Graduation cohort and Rate data
 - Postsecondary data (NSC + coursework)
 - Program Participation
 - Special Education
 - Staff Data
 - Early Childhood Data
- Additional Documentation and Guided Analysis Workbooks
- Implement Dashboard Cohorting Feature
- Reporting
- Enhancements to value-added models (differential effects, expanded grades and subjects)



DPI INFORMATION

○ Additional Information

- DPI LDS Project – www.dpi.wi.gov/lds
- SDPR – <https://apps2.dpi.wi.gov/sdpr/spr.action>
- WISEmaps - <https://wisemaps.dpi.wi.gov/>
- WISEdash - <http://dpi.wi.gov/lds/dashhome.html>
- OEA Growth page - <http://dpi.wi.gov/oea/growth.html>

○ Contact

- Melissa Straw (melissa.straw@dpi.wi.gov)



VERSiFIT INFORMATION

- Additional Information
 - VersiFit – www.versifit.com
- Contact
 - Brian Pritzl (pritzlb@versifit.com)



VARC INFORMATION

- Additional Information

- VARC – varc.wceruw.org

- Contacts

- Michael Christian (mchristian2@wisc.edu)
- Ernie Morgan (ernestmorgan@wisc.edu)





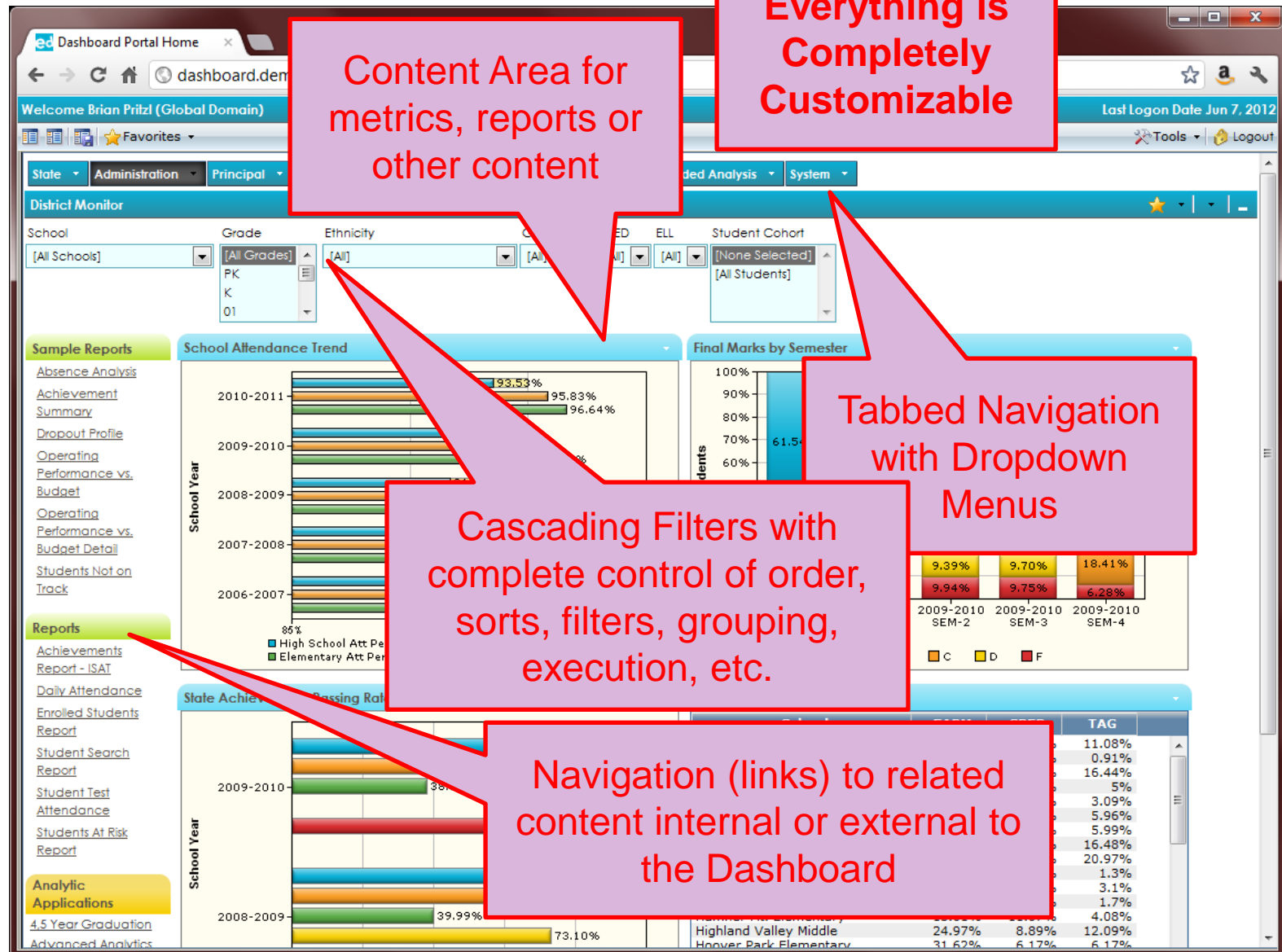
QUESTIONS?



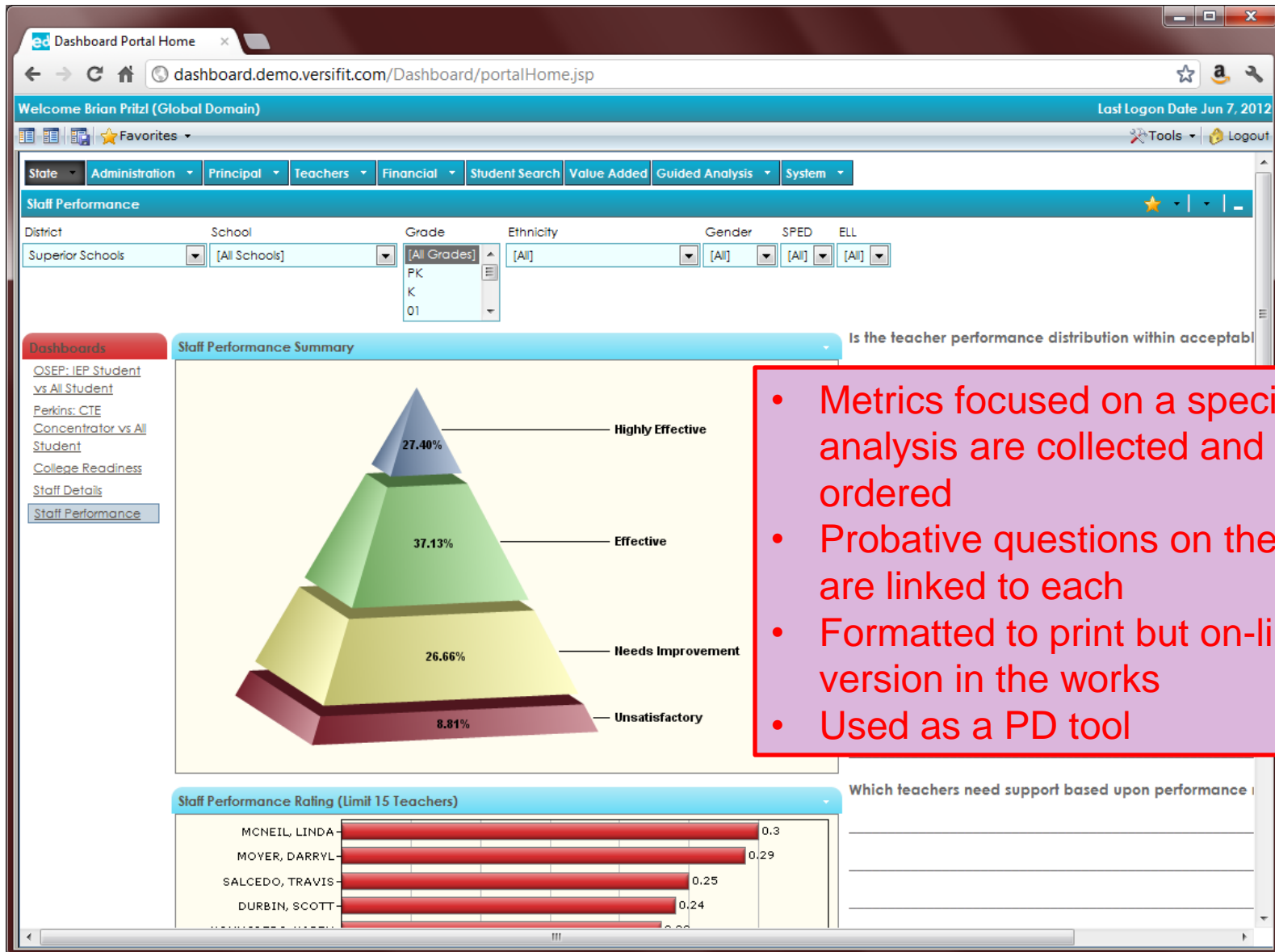
ADDITIONAL SCREENSHOTS



WISEDASH

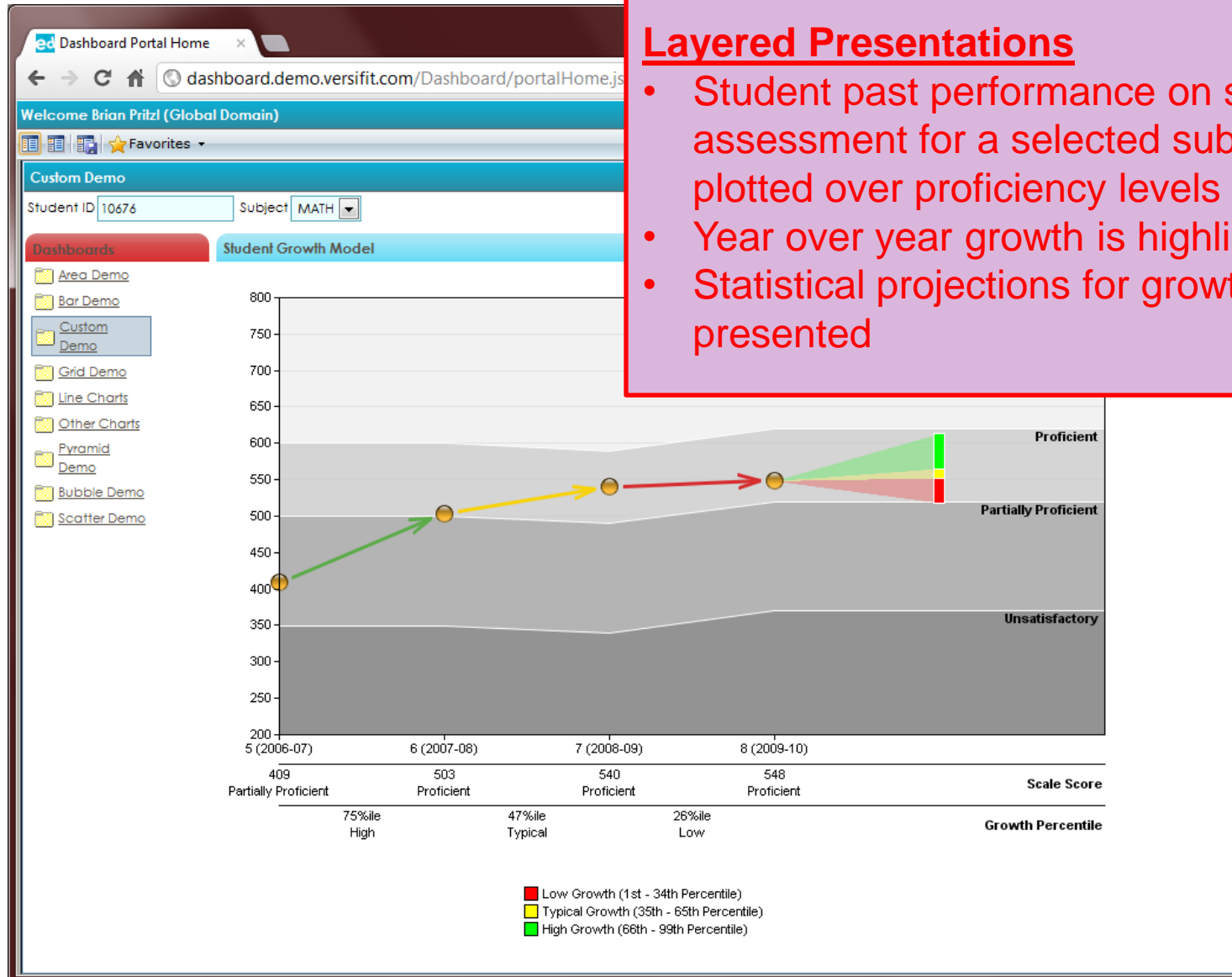


GUIDED ANALYTICS



- Metrics focused on a specific analysis are collected and ordered
- Probative questions on the data are linked to each
- Formatted to print but on-line version in the works
- Used as a PD tool

STUDENT GROWTH



Layered Presentations

- Student past performance on state assessment for a selected subject is plotted over proficiency levels
- Year over year growth is highlighted
- Statistical projections for growth is presented

VALUE ADDED DASHBOARD

Prompts are Cascading & Red in the Label calls user to a prompt requiring a selection

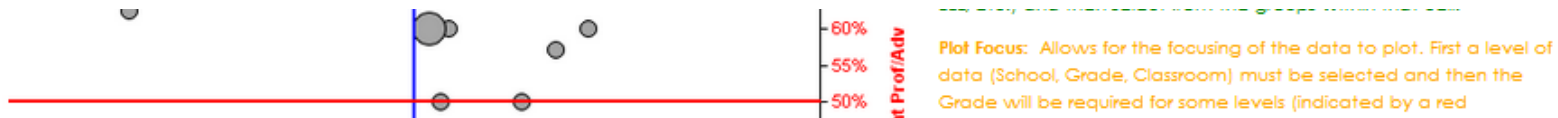
Value Added Go

Value Added Model Filters
Timespan School Year Test **Subject**

Demographic Filters
Cell Type **Cell Value**

Plot Focus
Level Grade School Classroom

Please select Filter values and click 'Go' button to display Dashboard.



Prompts with Yellow in the Label prompts the user to Press the Go button

Font Color of Prompts Tie to Guidance below

VALUE ADDED DASHBOARD

